

## ABSTRACT

Embodiments of the invention provide a method for removing contaminant particles from a substrate surface, where the method includes supporting a substrate in a face up position on a substrate support member and imparting a broadband impulse to the substrate support member in a direction that is substantially perpendicular to a surface of the substrate. The broadband impulse applied to the substrate support is calculated to be of sufficient magnitude to dislodge contamination particles from the surface of the substrate. The method further includes removing dislodged particles from an area proximate the substrate surface.

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